

We claim:

1. A nucleic acid isolated from a plant, which encodes a glycoprotein that is inducible by exposure of the plant to NPB.

2. The nucleic acid of claim 1, which is preferentially expressed in plant roots upon exposure of the plant to NPB.

3. The nucleic acid of claim 1, wherein the plant is selected from the group consisting of *Brassica napus* and *Arabidopsis thaliana* and is 3850-4150 nucleotides long.

4. The nucleic acid of claim 1, which has the restriction sites shown in Figure 4 for at least three enzymes.

5. The nucleic acid of claim 4, which encodes a glycoprotein of SEQ. ID NO:2.

6. The nucleic acid of claim 5, which is a cDNA comprising a region selected from the group consisting of SEQ. ID NO:3 and SEQ. ID NO:10.

7. A plant or plant part, which is a product of

claim 15.

18. A representative unit from the transgenic plant of claim 17.

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19. A cell from the transgenic plant of claim 17.

20. A recombinant DNA molecule comprising the nucleic acid molecule of claim 1, operably linked to a vector for transforming cells.

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21. A cell transformed with the recombinant DNA molecule of claim 11.

22. The cell of claim 21, selected from the group consisting of bacterial cells, yeast cells and plant cells.

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23. A transgenic plant regenerated from the transformed cell of claim 22.

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24. A nucleic acid molecule of at least 20 nucleotides comprising a sequence selected from the group consisting of:

(a) SEQ ID NO:1; and

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(b) a sequence that is at least about 60% homologous to the sequence of SEQ ID NO:1 or SEQ ID NO:10.

having SEQ ID NO:2;

1) a sequence encoding an amino acid sequence that is at least about 40% identical to SEQ ID NO:2;

2) a sequence encoding an amino acid sequence that is at least about 40% identical to SEQ ID NO:2;

3) a sequence encoding an amino acid sequence that is at least about 40% similar to residues 1-76, 613-669 or 1144-1161 of SEQ ID NO:2; and

4) a sequence hybridizing at moderate stringency to a sequence encoding residues 1-76, 613-669 or 1144-1161 of SEQ ID NO:2.

15 25. A polypeptide produced by expression of the nucleic acid sequence of claim 24.

26. Antibody immunologically specific for the polypeptide of claim 24.

20 27. A nucleic acid molecule between about 10 and about 100 nucleotides in length, which specifically hybridizes at moderate stringency to a portion of the nucleic acid molecule of claim 24.

25 28. A recombinant DNA molecule comprising the nucleic acid molecule of claim 24, operably linked to a vector for transformation of a cell.

1. The p-glycoprotein of claim 29, selected from the group consisting of bacterial cells, yeast cells and plant cells.

2. A transgenic plant regenerated from the cell of claim 1.

3. An isolated plant p-glycoprotein, which is inducible upon exposure of the plant to NPPB.

4. The p-glycoprotein of claim 32, which confers upon a cell in which it is found resistance to Rhodamine 6G.

5. The p-glycoprotein of claim 33, which is preferentially produced in roots upon the exposure to the NPPB.

6. The p-glycoprotein of claim 34, from a plant selected from the group consisting of *Brassica napus* and *Arabidopsis thaliana*.

7. The p-glycoprotein of claim 35, having an amino acid sequence that is selected from the group consisting of:

an amino acid sequence that is at least 80% similar to SEQ ID NO. 1;

an amino acid sequence that is at least 70% similar to SEQ ID NO. 2;

8. Nucleic acid

an amino acid sequence encoded by a nucleic acid sequence hybridizing to a degree stringency to a amino acid sequence encoding residues 1-76, 613-669 or 1144-1161 of SEQ ID NO:2.

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37. Antibody immunologically specific for the p-glycoprotein of claim 36.

38. The antibodies of claim 36, that are immunologically specific to residues 1-76, 613-669 or 1144-1161 of SEQ ID NO:2.

39. A plant p-glycoprotein gene promoter which is inducible by NPPB.

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40. The plant p-glycoprotein gene promoter of claim 39, that is part or all of residues 1-3429 of SEQ ID NO:10.

20 41. A plant with reduced levels of *plPAC* protein.

42. The plant of claim 41, wherein the native *plPAC* gene is mutated.

25 43. The plant of claim 42, wherein the *plPAC* gene is mutated to the sequence of a T DNA.

44. A plant of claim 41, 42 or 43, wherein the promoter is

c. The method of claim 44, wherein the population of plants is mutated by T-DNA insertion.